

WACA/WSDOT Meeting

Minutes for Thursday, September 20, 2007 Meeting

Attendees:

Bruce Chattin, WACA	Dave Burg, Ashgrove	Tom McGraw, Lafarge
Don Brouillard, WSDOT	Craig Matteson, Central	Allan Kramer, Lehigh
Dave Heizenrader, WSDOT	Dick Boss, Cadman	Kent Balcom, Headwaters
Mo Sheikhezadeh, WSDOT	Steve Ford, Miles S & G	Masha Wilson, WSDOT
Kurt Williams, WSDOT	Louie Bayless, Glacier NW	Bob Raynes, Rinker
Jim Walter, WSDOT	Neil Guptill, Glacier NW	Kurt Siegfried, Rinker
Tamson Omps, Glacier NW	Scott DiLoreto, BASF	Cathy Nicholas, FHWA
Rob Molohon, WSDOT		

Location: WSDOT HQ Mats Lab, Tumwater, WA.

Next WACA Meeting Date:

Wednesday, November 28, 2007 at WACA's Office in Des Moines, 9:30 AM – 12:00 Noon

Future WACA Meetings Dates:

Thursday, March 6, 2008, at WSDOT HQ Mats Lab, Main Conf Room, 9:30 AM – 12:00 Noon

Wednesday, June 18, 2008, at WACA's Office in Des Moines, 9:30 AM – 12:00 Noon

Wednesday, September 17, 2008, at WSDOT HQ Mats Lab, Main Conf Room, 9:30 AM – 12:00 Noon

Meeting Minutes are available at: <http://www.wsdot.wa.gov/biz/mats/>

Issue: Fly Ash

9/20/07 - Kent Balcom informed the group that the Centralia Power Plant is still adding kaolin when burning the powder river basin coal resulting in a Class F fly ash that while it doesn't meet the optional chemical requirements in Table 2 required by WSDOT Standard Specifications, (Section 9-23.10), Headwaters has been successfully running ASTM C 1567 [Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)] to prove the Class F fly ash produced at the Centralia power plant will mitigate for ASR. Kent also noted that currently the fly ash storage units are full, holding approximately 50,000 to 55,000 tons of fly ash.

Action Plan: Issue Complete.

Issue: Performance Specifications for Concrete Mix Designs - Mo Sheikhezadeh Issue:

Develop performance specification parameters for concrete that can be developed into specifications.

9/20/07 - Mo S. noted that work is ongoing on the development of the performance specification, and that there are plans to adopt the 2008 version of ACI 318 which ties the concrete exposure and environmental conditions into the design. Mo also noted that the variability of sulfates around the Washington state is unknown and there are plans to do sulfate testing around the state. Mo noted that there are concerns within WSDOT on the East side of the state that small concrete producers will not be able to meet performance specifications. The group discussed this and noted the following: That it is hard to comment without seeing the specification, There are private laboratory's available that could help small producers, The concrete specifications we discuss in these meetings does not get interpreted the same in the various WSDOT Project field offices. Mo suggested that a small group be formed to address the above issues as well as comment on the performance specification as it is developed.

Action Plan: Need volunteers from WACA to meet with Mo, updates group at next Meeting. – Mo S.

Issue: Viscosity Modifying Admixture – Don Brouillard/Mo Sheikhezadeh.

9/20/07 – Don B. noted that there had been no comments received on the proposed Self Compacting Concrete (SCC) specification and once the specification is implemented Viscosity Modifying Admixtures (VMA's) will be able to be added to the Qualified Products List. Neil G. noted that the specification needs to clarify that the L Box and J Ring tests are only required for SCC mixes and not for other concrete mixes. Robert R. noted that the test procedures need to be reviewed to ensure the WSDOT FOP's are available and current for the test required for SCC.

As a side note Mo S. gave the group an update on the SCC used for a test shaft and noted that both the J Ring and L Box tests were used and the SCC mix used passed both tested successfully. Mo noted that the SCC mix worked very well and was produced by a concrete producer who had never made SCC before, with a lot of help from John Tellvik with BASF. Mo noted that the biggest concern from the Drillers was the loss of slump in the SCC over time with up to 7-8 hour concrete pours in shafts.

Action Plan: Issue Complete.

Issue: Degradation for concrete Aggregate/Base Course – Jim Walter.

9/20/07 – Jim W. noted that a research project is starting with WSU on degradation and will involve testing on concrete cylinders, and the degradation specification has been implemented in the Amendments to the Standard Specifications [Amendment dated August 6th 2007]. Jim noted that the implementation of degradation on pit sources will be done as the pit renewal occurs, which is currently on a 5 year cycle. Jim also said that the ASA data base will need to be modified so it will correctly show degradation results for different aggregate uses.

Action Plan: Continue to give updates to WACA at Monthly Meetings. – Jim W.

Issue: Cement – Processing Additions – Rob S.

9/20/07 – Jim W. noted that the specification update has been completed and is being processed.

Action Plan: Issue Complete.

Issue: Increase Amount of GGBFS in Concrete – Rob S./Kurt W./Jim W.

9/20/07 – Kurt W. noted that the 30% test section of slab had been placed on SR 543 and there are plans in the next few weeks to place the 35% slag test section. Kurt noted that there were problems with the placement of the 30% slag test section that were caused by the delivery method chosen by the contractor, concrete ready mix trucks were used versus dump trucks, which significantly slowed down the amount of PCCP that could be placed and allowed the concrete mix set up in front of the paver at one point. Kurt noted that this does not reflect on how the 30% slag performed, but was caused by the concrete delivery method selected by the contract.

Action Plan: Update group at next meeting – Rob S./Kurt W./Jim W.

Issue: Truck Scales – Gary A.

9/20/07 – Kurt W. noted that he had requested that this issue be included on the AGC Admin team agenda, but at this point it had not been included.

Action Plan: Update group at next meeting – Gary A.

Issue: Questions on QPL form for WSDOT job Submittals – C. Matteson.

9/20/07 – Rob Molohon, State Materials Documentation Engineer, Craig M. discussed problems they have had utilizing the QPL form in particular the online process. Craig noted that there have also been inconsistencies from Project Office to Project Office on what documentation they will accept for approval of materials. Rob noted recommendations from the group concerning changes that will allow information to be entered on multiple items in the QPL without having to reenter information.

Action Plan: Issue complete.

Issue: HQ Materials Laboratory has hired a new Chemist – Jim W.

9/20/07 – Masha Wilson, WSDOT HQ Mats Lab Chemist, was introduced to the group.

Action Plan: Issue complete.

New Issue: Specification: 9-03.9(2) Shoulder Ballast and 9-03.17 Foundation Material Class A and Class B. – Gary Albert

1.) It's called Shoulder Ballast but where is it used? In looking at hundreds of project specification, I don't recall seeing Shoulder Ballast spec'd more than 3 times.

2.) *Foundation Class A Material has both an 1 1/2" sieve and 1 1/4" sieve requirement (duplication?) and couldn't Shoulder Ballast's gradation work instead? I have seen both Class A and B spec'd numerous times but never used as spec'd. When it is needed, we always ask to get a 2 1/2"x 3/4" Railroad Ballast substituted as an alternate or a 2"x 3/4", 2"x 1 1/4" or 4"x 2" substituted.*

9/20/07 – Kurt noted that Gary Albert was not able to attend today's meeting and this issue will be held until the next WACA meeting when Gary can attend.

Action Plan: Hold for next WACA meeting.

New Issue: Replacement of slag for fly ash: Don B. /Kurt W.

Question on interpretation of 1:1 replacement of slag for fly ash is by weight.

Excerpt from 2008 Std Specs Section 6-02.3(2) Proportioning Materials

The use of fly ash is required for Class 4000D and 4000P concrete, **except that ground granulated blast furnace slag may be substituted for fly ash at a 1:1 ratio.** The use of fly ash and ground granulated blast furnace slag is optional for all other classes of concrete.

Fly ash, if used, shall not exceed 35-percent by weight of the total cementitious material and shall conform to Section 9-23.9. Ground granulated blast furnace slag, if used, shall not exceed 25-percent by weight of the total cementitious material and shall conform to Section 9-23.10. When both ground granulated blast furnace slag and fly ash are included in the concrete mix, the total weight of both these materials is limited to 35-percent by weight of the total cementitious material.

The water/cement ratio shall be calculated on the total weight of cementitious material. The following are considered cementitious materials: Portland cement, fly ash, ground granulated blast furnace slag and microsilica.

As an alternative to the use of fly ash, ground granulated blast furnace slag and cement as separate components, a blended hydraulic cement that meets the requirements of Section 9-01.2(4) Blended Hydraulic Cements may be used.

9/20/07 – Don asked the group is slag should be by weight or volume? The group discussed and agreed that the substitution needs to be determined by weight.

Action Plan: Issue complete.

New Issue: Use of prepackaged concrete: Don B. /Kurt W.

Use of prepackaged concrete with hand mixing for fence posts, pipe plugs, pipe collars, Ref: Section 6-02.34(B)

9/20/07 – Kurt noted that WSDOT is getting request to use prepackaged concrete and hand mixing for items such as fence post and pipe plugs. Kurt asked if there was any concern with writing a specification allowing prepackaged concrete for items that are hand mixed. The group briefly discussed and noted that the prepackaged mixes have information on materials and mixing which could be used for acceptance. Kurt said he would draft a specification up for the groups review.

Action Plan: Develop draft specification for review by WACA – Don B. and Kurt W.

New Issue: Evaluation of the affects deicing materials have on concrete – Jim W.

Jim W. noted that Masha will be using the WSDOT environmental chamber to evaluate the affects deicing chemicals have on concrete. Study will start in November.

Action: Update Group as study progresses, Issue Complete:

New Issue: GSP notes WSDOT responsible for early break cylinders – Craig M/Mo S.

09/20/07 – Craig noted that there is a GSP, [GSP 0231701.GB6] that states, “The fabrication, curing, and testing of the early cylinders will be the responsibility of the Contracting Agency.” Craig questioned if the GSP is correct as the Standard Spec’s require the contractor to make early break cylinders. (Note: On Wednesday, September 26, 2007, Kurt emailed a copy of the GSP to Mo S. to determine if the GSP needs to be modified or deleted.)

Action: Determine if GSP needs to be modified or deleted, then Issue is Complete:

New Issue: New Federal Specification Requirement – Allan Kramer/Bruce Chatten.

09/20/07 – Allan K. noted that there is a new Federal Specification that requires a minimum 40% reduction of CO₂/ replacement of 40% of cement in concrete with pozzolans. Group briefly discussed and Bruce C. noted that he is concerned that this type of specification would appear in WSDOT contracts and requested that WSDOT work with WACA if this type of specification is considered for use on WSDOT projects. Jim W. noted that he had seen a copy of the specification and there are no current plans to include this type of specification on State Projects.

Action: Contact WACA if this type of specification is considered on WSDOT projects – Issue Complete.

New Issue: Acceptance Test for pumped concrete – Bob R.

09/20/07 – Bob R. noted that there are problems with acceptance testing when concrete is pumped as WSDOT tests the concrete at the discharge of the pump, and the air content changes from when the concrete is discharged from the truck and when it is pumped through the concrete pump. This issue was discussed at length and revolved around how the concrete pump trucks affect the air content in the concrete by various angles of the boom and whether the concrete is pumped up or down, it was noted that Cadman only guarantees the concrete at the point of discharge from the concrete truck, not from the end of the concrete pump. The discussion then moved to risk, and who accepts the risk. Mo S. noted that as an owner, WSDOT, wants the end result to be tested which is at the point of discharge from the pump. The group briefly discussed approval process for the concrete pump trucks. Mo requested that WACA make a proposal to WSDOT if they are proposing to modify tolerances for the air content in concrete, if they want to pursue this issue further.

Action: WACA needs to determine if the tolerances for air content in concrete need to be changed or not: Bruce C/Bob R./ Mo S.